

CLAIM AMENDMENTS

This list of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A method for fabricating a membrane electrode assembly (MEA), said method comprising:

providing a proton conducting membrane in its protonated form having a first side and a second side; and

spraying a catalyst ink on the first side of the membrane to deposit a catalyst layer of a cathode or an anode of the MEA[.]; and

clamping the membrane in a clamp to prevent the membrane from wrinkling as a result of the wetness of the catalyst ink on the membrane.

2. (Original) The method according to claim 1 further comprising spraying an ionomer layer on the membrane prior to spraying the catalyst ink on the membrane.

3. Cancelled.

4. Cancelled.

5. (Original) The method according to claim 1 further comprising drying the MEA under a heat lamp to dry the catalyst layer.

6. (Original) The method according to claim 1 wherein spraying the catalyst ink includes spraying the ink over several passes to deposit the ink on the membrane to the desired thickness.

7. (Original) The method according to claim 1 further comprising spraying the catalyst ink on the second side of the membrane to deposit a catalyst layer of the other of the anode or the cathode.

8. (Currently Amended) The method according to claim 1 wherein the catalyst ink includes a catalyst, solvent and ~~half the~~ an ionomer having a concentration that is about half of the ionomer concentration of the catalyst in a final cathode or anode of the MEA.

9. Cancelled.

10. (Original) The method according to claim 1 further comprising soaking the MEA in water.

11. (Original) The method according to claim 1 further comprising soaking the MEA in sulfuric acid to remove excess solvent and ensure protonation.

12. (Original) The method according to claim 1 further comprising hot-pressing the MEA after the catalyst ink is sprayed on the membrane to remove excess solvent and compress the catalyst layer.

13. (Currently Amended) A method for fabricating a membrane electrode assembly (MEA), said method comprising:

providing a proton conducting membrane in its protonated form;

spraying a catalyst ink on the membrane to deposit a catalyst layer of a cathode or an anode of the MEA, wherein spraying the catalyst ink includes spraying the ink over several passes to deposit the ink on the membrane to the desired thickness; and

drying the MEA under a heat lamp as the catalyst ink is being sprayed during the several passes to dry the catalyst layer.

14. (Original) The method according to claim 13 further comprising spraying an ionomer layer on the membrane prior to spraying the catalyst ink on the membrane.

15. - 20. Cancelled.

21. (New) A method for fabricating a membrane electrode assembly (MEA), said method comprising:

providing a proton conducting membrane in its protonated form having a first side and a second side; and

spraying a catalyst ink on the first side of the membrane to deposit a catalyst layer of a cathode or an anode of the MEA, wherein the catalyst ink includes a catalyst, solvent and an ionomer having a concentration that is about half of the ionomer concentration of the catalyst in a final cathode or anode of the MEA.

22. (New) The method according to claim 21 further comprising spraying an ionomer layer on the membrane prior to spraying the catalyst ink on the membrane.

23. (New) The method according to claim 21 further comprising drying the MEA under a heat lamp to dry the catalyst layer.

24. (New) The method according to claim 21 wherein spraying the catalyst ink includes spraying the catalyst ink over several passes to deposit the catalyst ink on the membrane to the desired thickness.

25. (New) The method according to claim 21 further comprising spraying the catalyst ink on the second side of the membrane to deposit a catalyst layer of the other of the anode or the cathode.

26. (New) The method according to claim 21 further comprising clamping the membrane in a clamp to prevent membrane wrinkling as a result of the wetness of the catalyst ink as it is being sprayed on the membrane.

27. (New) The method according to claim 21 further comprising soaking the MEA in water.

28. (New) The method according to claim 21 further comprising soaking the MEA in sulfuric acid to remove excess solvent and ensure protonation.

29. (New) The method according to claim 21 further comprising hot-pressing the MEA after the catalyst ink is sprayed on the membrane to remove excess solvent and compress the catalyst layer.